



## CLEANUP ACTION LEVEL GUIDELINES FOR GASOLINE AND OTHER PETROLEUM HYDROCARBONS

NORTH DAKOTA DEPARTMENT OF HEALTH  
DIVISION OF WASTE MANAGEMENT - UST PROGRAM  
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REV. 7/00

This document provides cleanup "action level guidelines" for groundwater, surface water, and soil contaminated by a release, spill, or overfill of gasoline or other petroleum hydrocarbons from an underground storage tank system. Petroleum underground storage tanks are regulated through the North Dakota Underground Storage Tank (UST) Rules, Chapter 33-24-08 of NDAC Article 33-24.

A petroleum UST system is defined as, "...an underground storage tank system that contains petroleum or a mixture of petroleum with ***de minimus*** quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils." Under all circumstances, cleanup decisions are made on a site-by-site basis and take into consideration the nature of the release and the site, including the following factors:

1. The location of the site in relation to the surrounding population;
2. The presence of free product;
3. The presence and proximity of municipal utilities;
4. The potential for migration of vapors;
5. The hydrogeology of the site and groundwater use;
6. The use and location of wells potentially affected by the release; and
7. The future site use.

### **GASOLINE AND OTHER PETROLEUM HYDROCARBON CONTAMINATION**

#### **I. Groundwater**

Cleanup action levels for groundwater are determined on a site-by-site basis in accordance with criteria established by the Division of Water Quality. In general, however, the following limits can be applied:

Contaminant	Action Level
Benzene Total Petroleum Hydrocarbons (TPH)	5 ppb (parts per billion) 500 ppb

## II. Surface Water

Surface water limits for contamination by gasoline or other petroleum hydrocarbons are established by the Division of Water Quality.

## III. Soil and Fill Material

All gasoline contaminated soil and fill material or soil and fill material contaminated by other petroleum hydrocarbons that exceeds a total of 100 parts per million (ppm) TPH as gasoline or fuel oil generally must be removed from the site or treated in-place until the TPH level is below 100 ppm. Treatment or disposal methods should be consistent with the Department's ***"Guidelines for Proper Land Treatment of Petroleum Product Contaminated Soils"*** or may be handled in any of the methods listed below:

1. Taken to a state-approved landfill for treatment (landfarming). Permission from the owner/operator of the landfill facility is advised before any gasoline contaminated soil or fill is delivered for treatment;
2. Taken to an asphalt plant for reuse in the manufacture of asphalt, contingent on approval by the Division of Air Quality;
3. Spread on a relatively impermeable material and aerated until the TPH level is below 10 ppm with approval of the Division of Waste Management and local fire and health officials; or
4. Treatment of the soil in-place (biodegradation, leaching, venting, etc.) until the TPH value is less than 100 ppm. If this method is chosen, soil and groundwater samples must be submitted on a regular schedule approved by the Department to monitor progress.

Under certain circumstances, the Division of Waste Management may accept a proposal from the responsible party to leave soil with TPH levels exceeding 100 ppm in-place. Any proposal must provide assurances that concentrations of TPH greater than 100 ppm in the soil will not substantially alter the quality of the environment and that TPH in the contaminated soil will not migrate and contaminate groundwater.

## **POLICY STATEMENT**

The purpose of this policy is to institute contamination cleanup action levels, for petroleum and other petroleum hydrocarbons, that will protect groundwater and the environment. The Division of Water Quality administers the water quality programs in the state of North Dakota. Cleanup requirements more stringent than those listed in this document may be required by the Division of Water Quality.

This policy sets contamination cleanup action levels that should protect North Dakota's groundwater resource for future use and prevent future groundwater problems through cleanup of contaminated soil. Cleanup of releases from underground storage systems is required by the North Dakota Underground Storage Tank Rules and subject to appropriate enforcement action(s), if deemed necessary.

Once pollution from an UST system has been documented, the Division of Waste Management will require the responsible party (usually the tank owner) to complete an investigation for soil and groundwater cleanup. The investigation must adequately determine the areal and vertical extent of contamination in the soil and groundwater through soil borings and/or installation of groundwater monitoring wells or other techniques approved by the Department. Once the extent of contamination has been determined by the responsible party, a proposal for corrective action may be required. A Corrective Action Plan (CAP) must be submitted for review and approval by the Division of Waste Management and the Division of Water Quality prior to implementation, except as approved by the Department in an emergency situation. All contamination levels must be established using laboratory analytical methods. A list of certified laboratories and recommended sampling and laboratory methods can be obtained from the Division of Waste Management.

### **REGULATORY AGENCIES**

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ND Department of Health  
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ND Department of Health  
**Division of Air Quality (701-328-5188)**  
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